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**\$35**

# **Native Warm-Season Grasses**

**Identification, Establishment and Management for  
Wildlife and Forage Production in the Mid-South**

**a manual for natural resource professionals  
and other land managers**





# **Native Warm-Season Grasses**

## **Identification, Establishment and Management for Wildlife and Forage Production in the Mid-South**

**a manual for natural resource professionals  
and other land managers**

Craig A. Harper, Associate Professor/Extension Wildlife Specialist  
The University of Tennessee, Department of Forestry, Wildlife and Fisheries

Gary E. Bates, Professor/Extension Forage Specialist  
The University of Tennessee, Department of Plant Sciences

Michael P. Hansbrough, Private Lands Biologist  
USDA Natural Resources Conservation Service

Mark J. Gudlin, Private Lands Liaison  
Tennessee Wildlife Resources Agency

John P. Gruchy, Research Associate  
The University of Tennessee, Department of Forestry, Wildlife and Fisheries

Patrick D. Keyser, Associate Professor/Center for Native Grasslands Management  
The University of Tennessee, Department of Forestry, Wildlife and Fisheries

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Corresponding Author:      Craig A. Harper  
   Dept of Forestry, Wildlife & Fisheries  
   University of Tennessee  
   Knoxville, TN 37996  
   charper@utk.edu  
   (865) 974-7346

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## Preface

Native warm-season grasses (nwsg) have received a tremendous amount of attention since the early 1990s, especially among wildlife managers trying to enhance habitat for northern bobwhites, grassland songbirds and other early-successional species. During this time, much work has been devoted to improving methods for establishment, identifying sound management practices and documenting the response of wildlife to habitat restoration efforts. Also noteworthy during this period is the interest nwsg have generated among forage and livestock producers. Research continues to show various nwsg are viable forage for hay production and grazing for several livestock species. This manual is intended to provide in-depth information on identifying, establishing and managing nwsg for natural resources professionals, forage and livestock producers and other landowners attempting to grow and manage nwsg either for wildlife and/or livestock.



## Introduction

Nwsg are grasses historically indigenous to an area that actively grow during the warm months of the year. In the Mid-South, that includes those warm-season grasses that occurred prior to European settlement. Many non-native grasses occur “naturally,” but that doesn’t mean they are native. Naturalized grasses originated outside a particular region, but are able to exist (and often thrive) in the wild (without cultivation) in self-perpetuating populations. Most naturalized grasses in the Mid-South were brought to North America from Europe (tall fescue, orchardgrass), Africa (bermudagrass, crabgrass) or South America (dallisgrass, bahia-grass) as a forage crop.

Grasses are classified as warm- or cool-season based on their chemical pathways for photosynthesis. Warm-season grasses fix energy into 4-carbon units and are referred to as C4 grasses. As a result, their photosynthetic potential is much higher than that of cool-season grasses. They make most of their active growth when minimum daily temperatures reach approximately 60 F and soil temperatures reach 55 F. The optimum temperature for warm-season grass production is 85 – 95 F. Nwsg are dormant during autumn and winter. Cool-season grasses fix energy into 3-carbon units and are referred to as C3 grasses. They make most of their active growth during fall and spring months when the minimum daily temperature is approximately 40 F. The optimum temperature for cool-season grasses production is 60 – 80 F. What this means is warm-season grasses grow more rapidly during a relatively short period, while cool-season grasses grow more slowly during a longer period.

Technically, the term nwsg could include numerous warm-season grasses native to the Mid-South region. Nonetheless, seven species are most commonly promoted for their value as cover for wildlife and/or forage for livestock. These include big bluestem, little bluestem, broomsedge bluestem, indiagrass, sideoats grama, switchgrass and eastern gamagrass. It is important to realize not all of these have the same quality for wildlife habitat or livestock forage. For example, broomsedge offers excellent nesting habitat for bobwhites, but poor forage for livestock.



## Parts of a grass plant

